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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,803		Ewen A. Campbell	1200317 N	8902

35227 7590 05/11/2006

POLYONE CORPORATION
33587 WALKER ROAD
AVON LAKE, OH 44012

EXAMINER

SZEKELY, PETER A

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/560,803	Applicant(s) CAMPBELL, EWEN A.	
	Examiner Peter Szekely	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 2, 3 and 13 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claims as article claims. The intended use does not further limit the claimed composition.

Specification

2. The disclosure is objected to because of the following informalities: On page 6, lines 7-11, a distinction is made between polymers, which are "strictly thermoplastics", and thermoplastic polyolefin elastomers. The distinction is not understood. Are the elastomers "loosely thermoplastics"? Applicant can be his own lexicographer, but he cannot use terms outside their ordinary and accepted meaning.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The difference between a "polyolefin thermoplastic" and a "polyolefin elastomer" eludes the examiner. All non-crosslinked polyolefins are thermoplastic. In claims 1 and

Art Unit: 1714

15 the phrase "at least about" renders the claims indefinite [see *Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 18 USPQ2d 1016 (Fed. Cir. 1991)]. It has to be either "at least" or "about", not both. Furthermore, in the same claims it is not known whether the 65 parts of filler per 100 parts of polyolefin alloy is by weight, volume or mole.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukui et al. 5,091, 462, Shinonaga et al. 5,462,987, Hayashi et al. 5,889,087, Asai et al. 5,889,100, Kobylivker et al. 6,072,005, Kausch et al. 6,414,070, Ebrahimian et al. 6,492,453, Schall et al. 6,750,282, Nishihara 6,846,872, Watanabe et al. 6,868,993, Fukatani et al. 6,924,334, Furukawa et al. 2002/0006998, Kitano et al. 2004/0002569, Cheung et al. 2005/0032959 or Compco Pty Ltd WO 03/0829666, in view of Hayashi et al. 6,232,377.

8. Fukui et al. disclose polypropylene, olefin elastomer, clay and inorganic filler in claim 5 and metal hydroxides in the paragraph overlapping columns 6 and 7. Shinonaga et al. teach polypropylene and EP rubber with filler in claim 1 and magnesium hydroxide and bentonite in claim 3. Hayashi et al. ('087) recite EVA, metallocene catalyzed ethylene-alpha-olefin (EAO) and inorganic flame-retardant in claim 1, aluminum- and magnesium hydroxide in claim 3, zinc borate, meta-barium

Art Unit: 1714

borate and montmorillonite in column 5, lines 47-56. Asai et al. divulge polypropylene and EP rubber in claim 1, aluminum and magnesium hydroxide and montmorillonite in column 8, lines 26-36. Kobylivker et al. reveal EP copolymer with VLDPE and filler in claim 1, metallocene catalyzed polymers in column 5, lines 5-53, aluminum hydroxide and bentonite clay in column 6, lines 1-8. Kausch et al. display at least one polyolefin, nanocomposite and inorganic flame-retardant in claims 1-2, ethylene-octene copolymer in claim 3, maleated PP blended with it in claim 6 and metal hydrates as inorganic flame-retardants in column 5, lines 48-62. Ebrahimian et al. relate two polyolefins, metal hydrates, borates and nanoclay in claim 1, different polyolefins in claim 2, nanoclays in claim 7 and polyolefin blend in claim 10. For concentrations, see Table 2. Schall et al. describe polyolefins, metal hydrates and layered silicate in claim 1, layered silicates in claim 6, boron compounds in claim 9 and different polyolefins in column 3, lines 49-51. Nishihara discusses EAO in claim 6, PP in claim 7, metallocene catalysts in column 7, lines 9-12, aluminum-, magnesium-, calcium- and barium hydroxides, hydrotalcite, zinc borate, barium metaborate, montmorillonite and bentonite in column 11, lines 2-22. Watanabe et al. present EP block copolymer, EAO rubber and inorganic filler in claim 1, magnesium hydroxide and bentonite in column 3, lines 45-56. Fukatani et al. show polyolefin, metal hydroxide and layered silicate in claim 1, polyolefins in claim 3, polyolefin block copolymer in claim 15, hydroxide concentration in column 3, lines 19-22 and combination of hydroxides in column 10, lines 46-66. Furukawa et al. cite elastomer, resin and filler in claim 1, polyolefin elastomer in claim 2, polypropylene in claim 3, clay in claim 5, smectite, aluminum- and magnesium hydroxide and their

Art Unit: 1714

blend in paragraph 0012. Kitano et al. list polyolefin and filler in claim 1, polypropylene in claim 14, bentonite and aluminum hydroxide in paragraph 0030. Cheung et al. enumerate a blend of propylene-alpha-olefin copolymers in claims 1-3 and 7-9, flame-retardant filler in claim 14, Ziegler-Natta and metallocene catalyzed polymers in claim 18, metal hydrates in claim 23, nanoclays, metal hydroxides and concentrations in paragraph 0009. Compco mentions ethylene copolymer and nanofiller in claim 1, metallocene catalyst in claim 5, blend of polyolefins in claims 22-28, blends of metal hydroxides in claim 51 and borates on page 14, line 13. Hayashi et al. ('377) exhibit a blend of polyolefin with EAO prepared with metallocene catalyst, metal hydrate and borate in claim 1, EVA in claim 2, ethylene/1-octane copolymer in claim 3, aluminum- and magnesium hydroxide in claim 5 and zinc borate in claim 7. It would have been obvious to one having ordinary skill in the art; at the time the invention was made, to select applicant's ingredients from a list of equivalents. It would have been also obvious to increase the hydroxide concentration to obtain optimum flame-retardance. Hayashi et al. ('377) mentions all of the claimed ingredients, with the exceptions of nanoclay. To add another flame-retardant to a flame-retardant composition is obvious. Whether barium metaborate is added as a biocide, a filler or a flame-retardant is immaterial. Metallocene catalyzed polymers have the same composition as polymers yielded by the Ziegler-Natta process, and thus there is no patentable distinction between polymers obtained by these processes.

9. Any inquiry concerning this communication or earlier communications from the

Art Unit: 1714

examiner should be directed to Peter Szekely whose telephone number is (571) 272-1124. The examiner can normally be reached on 7:00 a.m.-5:30 p.m. Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter Szekely
Primary Examiner
Art Unit 1714

P.S
5/10/06